

COMMANDER'S CASEVAC SYSTEM

89-5

November 1989



CENTER FOR ARMY LESSONS LEARNED

FORT LEAVENWORTH

COMMANDER'S CASEVAC SYSTEM

NEWSLETTER NO. 89-5

TABLE OF CONTENTS

[INTRODUCTION](#)

[HISTORICAL EXAMPLE](#)

[PLAN](#)

[PREPARATION](#)

[EXECUTE](#)

[NCO CORNER](#)

[SAFETY](#)

[ACKNOWLEDGEMENTS](#)

The Center for Army Lessons Learned (CALL) is a subordinate directorate of the Combined Arms Training Activity at the Combined Arms Center, Ft Leavenworth, KS. CALL's mission is to provide combat relevant lessons learned to the Total Army (Active and Reserve Components). This CALL Bulletin is one of many CALL products designed to fulfill that mission. To be of value, lessons learned must be disseminated. By publishing these lessons learned, we hope that soldiers, units and ultimately the entire Army will benefit. By remembering the past, we will not be condemned to repeat it.

The CALL Bulletin is a functional bulletin published under the authority of AR 310-2, para 4-28. It is used to publish official information concerning lessons learned in the conduct of military operations. Reproduction of this publication is actively encouraged.

Unless otherwise stated, whenever the masculine or feminine gender is used, both are indicated.

INTRODUCTION

Historically, the early days of combat have revealed Casualty Evacuation (CASEVAC) systems to be disjointed and inefficient. This has been validated by years of experience at the Combat Training Centers (CTC). On the average, 50% of our Wounded in Action (WIA) at the CTCs later die of wounds due to lack of timely triage and CASEVAC.

This newsletter, targeted at Task Force Commanders, focuses on how the commander and members of the battle staff plan, prepare, and execute casualty evacuation (CASEVAC). It contains substantial input from the Academy of Health Sciences, derived from Combat Training Center (CTC) observations. It provides relevant and useful information to brigade and battalion commanders (maneuver and logistics) to help increase their understanding of their medical assets. Lastly, it contains many Tactics and Techniques (TT) proven successful at the CTCs and, if adopted by medical company commanders and platoon leaders, will increase the efficiency of their units.

The challenge for our leaders has always been to strike that critical balance between mission success and welfare of the soldiers. Command emphasis and thorough understanding of the CASEVAC system, training to standard, and sound medical planning at the TF level brings this dilemma into sharp focus and facilitates successful accomplishment of both those objectives.

JAMES M. LYLE
Brigadier General, USA
Commanding

HISTORICAL EXAMPLE

During the fierce fighting in the Huertgen Forest in Germany in Oct-Nov 1944, the muddy trails in that dense and depressing woods were barely adequate for the movement and supply of healthy troops, not to mention wounded ones.

Often most supplies had to be hand carried into the forest. Additionally, the Germans had scattered anti-personnel mines in profusion over the trails and clearings. The wet weather of the German fall turned even those trails into impassable quagmires.

The men of the 112th Infantry Regiment, 28th Infantry Division, attacking along the Kall trail near Kommerscheidt, had no hope of safe evacuation if wounded. As the Regiment began to fall back under German counterattacks, the wounded were gathered into one column and, in hopes of safe passage, marched openly along the Kall trail. This enabled the remaining soldiers to proceed with their breakout attempt through the woods, unimpeded by the wounded.

The litter bearers, struggling through the mud, were often hit by artillery shrapnel, adding to the number of those who had to be carried. Four men were often needed to carry one wounded man through the mud. In desperation, the litter bearers were forced to gather the men together in a temporary aid station nearby.

The situation improved somewhat when the medics found some abandoned trucks and one Weasel (a fully-tracked, small cargo carrier) and loaded them up with wounded early on the 9th of November. A German patrol temporarily captured the soldiers and halted evacuation of the wounded for two more days. On the 11th of November, with the establishment of a truce and the assistance of a German doctor, the wounded were allowed to evacuate the aid station to better facilities in Vossenack. (1)

Later the following spring...

" I proceeded down the trail on foot. It was obviously impassable for a jeep; it was a shambles of wrecked vehicles and abandoned tanks. The first tanks that attempted to go down the trail had evidently slid off and thrown their tracks. In some cases the tanks had been pushed off the trail and toppled down the gorge among the trees. Between where the trails begin outside of Vossenack and the bottom of the canyon, there were four abandoned tank destroyers and five disabled and abandoned tanks.

" In addition, all along the sides of the trail there were many, many dead bodies, cadavers that had just emerged from the winter snow. Their gangrenous, broken and torn bodies were rigid and grotesque, some of them with arms skyward, seemingly in supplication. They were wearing the red keystone of the 28th Infantry Division, "The Bloody Bucket." It had evidently fought through there the preceding fall, just before the heavy snows.

" I continued down the trail for about half a mile to the bottom. There a tumbling mountain stream about six feet wide had to be crossed. A stone bridge had been over it but had long since been demolished, and a few planks were extended across the stone arches for the use of individual infantrymen.

" Nearby were dozens of litter cases, the bodies long dead. Apparently an aid station had been established near the creek, and in the midst of the fighting it had been abandoned, many of the men dying on their stretchers." (2)

OBSERVATIONS: The division had attacked on a narrow avenue of approach on terrain friendly to the enemy, and had failed to fully appreciate the terrain and weather.

CASEVAC was planned for only one route, and that route had not been secured, subsequently coming under constant enemy artillery fire. The unit was not prepared for the massive number of casualties which occurred. The CASEVAC system was not prepared to deal with poor trafficability due to rain and mud.

RESULT: The CASEVAC system was overwhelmed.

The 112th Regiment suffered 2,093 casualties in Huertgen: 232 captured, 431 MIA, 729 WIA, 167 KIA, and 544 non-battle losses.

LESSONS LEARNED: Casualty evacuation requires extensive planning, preparation, battlefield initiative, and coordination. Efficient or broken, your CASEVAC system will have a profound impact on the morale and combat effectiveness of your unit.

Notes:

1. Charles B. McDonald, The Siegfried Line, pp. 371-372.
2. LTG James M. Gavin, On To Berlin, pp. 400-409.

PLAN

A. PLANNING AND COORDINATION OF MEDICAL SUPPORT

Anticipating and adequately providing CASEVAC are fundamental to a sound medical plan. Care and disposition of a large number of casualties can be a tremendous operational handicap. However, a substantial number of unanticipated casualties or casualties in an unanticipated location cannot only hinder but defeat the attack.

Integrated medical support planning is the essence of proactive medical CASEVAC. Integrating the medical support plan with the tactical scheme of maneuver increases the total plan's effectiveness by synchronizing critical elements of combat power, to include medical assets.

Violent high-tempo combat often results in areas of heavier combat action with resulting heavy casualties. Medical assets then, as with engineer or fire support assets, must be weighted toward those areas of main effort. Commanders and medical platoon leaders must plan beyond the immediate tactical objectives when planning medical operations. This positions medical support so that the tactical commander can exploit the opportunities created by tactical success.

B. MEDICAL SUPPORT TO THE TACTICAL COMMANDER'S SCHEME OF MANEUVER

1. Medical Support Characteristics of Offensive Operations:

a. General

- ◆ Penetration of enemy defenses normally produces the heaviest medical work load.
- ◆ Use non-standard ground evacuation (other than medical vehicles) for CASEVAC of lightly wounded patients.
- ◆ As areas of casualty density move away from hospital/aid station locations, routes of casualty evacuation lengthen.
- ◆ The major casualty area of the battalion will frequently be the zone of the main attack. The commander's allocation of forces generally indicates area of greatest casualty loads.
- ◆ Identify areas of anticipated casualty density by analysis of the tactical plan and terrain. The S1 is an integral part of Battle Staff IPB and wargaming process.

b. Leader considerations:

- ◆ Locate Battalion Aid Station (BAS) as far forward as the Task Force Commander and METT-T will allow. Heavy enemy direct and indirect fires may make forward deployment of the BAS too risky.
- ◆ Maintain the mobility of the BAS.
- ◆ Pre-designate casualty collection points.
- ◆ BAS must have sufficient medical supplies to treat the maximum number of expected casualties.
- ◆ Aid station location must mutually support company teams.
- ◆ Task organize and allocate evacuation assets in relation to projected casualties.
- ◆ In a meeting engagement, the aid station should consider traveling with the combat trains or trailing maneuver company.
- ◆ Avoid premature deviation from the medical support plan. Allow the situation to develop, but be proactive.
- ◆ Casualty collection starts slowly but will become rapid as the attack progresses.
- ◆ A decision to establish two Treatment Teams must be balanced against the loss of flexibility which may be later required to exploit tactical opportunities.
- ◆ Plan for and request additional CASEVAC and treatment support from Forward Support Medical Company.
- ◆ Units conducting the main effort will have the highest casualty load. Weight the main effort.
- ◆ Plan for and use Ambulance Exchange Points (AXP) routinely.
- ◆ During movement to contact, casualties may occur in isolated groups over long distances as units engage pockets of resistance.

Exploitation and pursuit rarely involve direct breaching of enemy defensive positions, so medical support is not confronted with as heavy a work load in the opening phases of this operation.

- ◆ When exploitation and pursuit precludes prompt CASEVAC, carry patients forward to the next site or leave with a medic.
- ◆ Speed of exploitation and pursuit extends the battle and distance increases the use of air ambulances in medical resupply and casualty evacuation operations.
- ◆ Use appropriate ground and air evacuation techniques based on patient categories of precedence (URGENT-PRIORITY-ROUTINE) and METT-T.

2. Medical Support Characteristics of Defensive Operations

a. General

- ◆ The depth and dispersion of the defense creates significant time and distance problems. In a non-linear defense, enemy and friendly units will be intermingled, especially in poor visibility. MSRs and routes between positions may be interdicted at one time or another.
- ◆ Make maximum use of tactical and logistics vehicles for patient evacuation, as they are available without adversely affecting their mission. For example, empty ammo trucks can back-haul casualties. Consider using damaged vehicles being towed to the BSA as casualty carriers.
- ◆ Security forces will most likely be required to withdraw while simultaneously carrying their casualties.
- ◆ Attacker initiative may preclude accurate prediction of initial areas of casualty density.

b. Leader Considerations:

- ◆ Use available aviation elements for evacuation in addition to their normal role.
- ◆ Preserve aid station mobility to provide flexibility.
- ◆ Evacuate patients by ground to nearest Casualty Collection Point (CCP).
- ◆ Integrate medical support matrix with defensive overlays.
- ◆ If deviating from the matrix, maintain contact with supported units. Ensure aid station location is known at all times.
- ◆ Consider ground ambulances moving with a logistical convoy whenever practical. That provides help in navigation and assistance in the event of breakdowns.
- ◆ Request assistance from the supporting medical company when casualty evacuation workload exceeds your unit's capability.
- ◆ Medical support must eventually be in position to support the counterattack.
- ◆ BAS should remain on location as long as practical.
- ◆ Issue litters and other additional medical supplies to maneuver elements to assist them to collect, treat, and evacuate casualties. For example, the ISG could carry a litter in his vehicle. One tank per platoon may require a litter.

Preparation is the second phase of the Army's Plan - Prepare - Execute model. How well a unit prepares for combat can often determine the outcome of the battle. The next section discusses the fundamentals of sound Preparation for combat.

PREPARATION

" I had never heard of a battle in which everybody was killed; but this seemed likely to be an exception, as all were going by turns."

* Captain John Kincaid, fl. 1815, Adventures with the Rifle Brigade (Reminiscence of Waterloo)

A. MEDICAL SUPPORT MATRIX

The Medical Support Matrix is a concise, easy method to understand the medical support plan. It is a valuable planning and execution tool for both defense and offense, and is used to explain how each maneuver element is medically supported during the battle. It is event-oriented, not time-oriented. This information can also be incorporated into either the tactical overlay or the Combat Service Support Overlay/Annex.

B. EXPLANATION OF SAMPLE MEDICAL SUPPORT MATRIX

As the maneuver units depart the assembly area toward the LD/LC, Treatment Teams (TT) 1 and 2 support from their present positions. As units cross Phase Lines Red, Blue, Green, and OBJ Dallas and Omaha, TT 1 and 2 deploy to new support positions. (Figure)

Male and female names are used for checkpoints to distinguish the two treatment teams.

AS MANEUVER UNITS CROSS THESE CONTROL MEASURES, TT SUPPORT FROM THESE GRIDS:

<u>UNITS</u>	<u>CROSS LD</u>	<u>CROSS PL</u>			<u>ON OBJ</u>
		<u>RED</u>	<u>PL BLUE</u>	<u>PL GREEN</u>	<u>DALLAS</u>
CO TM A:	TT 1	TT 1	TT 1	TT 1	TT 1
and	(GRID)	(GRID)	(GRID)	(GRID)	(GRID)
CO TM B	(TOM)	(JIM)	(BILL)	(GREG)	(JOHN)

					<u>ON OBJ</u>
					<u>OMAHA</u>
CO TM C:	TT 2	TT 2	TT 2	TT 2	TT 2
and	(GRID)	(GRID)	(GRID)	(GRID)	(GRID)
CO TM D	(CAROL)	(BARB)	(JANICE)	(MARY)	(ALICE)
TM 1 USE ROUTE DAVE					
TM 2 USE ROUTE LESLIE					

EXECUTION

"Men, all I can say is, if I had been a better general, most of you would not be here."

--George S. Patton Jr. to wounded soldiers at Walter Reed Hospital, Washington, 1945

A. FOLLOW AND SUPPORT CONCEPT

- ◆ Use of a Jump Aid Station by the TF medical platoon is effective but METT-T dependent. The medical platoon leader should jump part of the BAS out ahead in anticipation of surge requirements. Distance is a function of whether the TF is conducting offensive or defensive operations. The senior enlisted medic should accompany the Jump Aid Station to provide medical advice and expertise. This "follow and support" concept facilitates triage forward, which in turn improves the rate of casualty treatment at the main aid station.
- ◆ Light infantry units have very few organic resources for CASEVAC. One technique, METT-T permitting, is to use a platoon made up of assets from within the BN TF to provide "follow and support" CASEVAC support. This platoon follows the attacking unit performing CASEVAC as required.

B. CONTROL OF JUMP AID STATIONS

- ◆ Jump Aid Stations must be properly controlled to prevent ambulances and aid stations from accidentally being positioned at risk to enemy action. Designate pre-planned checkpoints along the BN/TF MSR which indicate possible locations for the Jump Aid Station. Include these locations in the operations overlay of BN OPORD. As the Jump Aid Station follows the lead maneuver units and one of those units comes into contact, the Jump Aid Station should move to the nearest checkpoint and prepare for treatment of casualties. As the Jump Aid Station moves into position, make a net call over the Admin/Log net to inform units of its location. Medical leaders must be proactive and "push" their support forward.

C. COMMUNICATIONS REDUNDANCY

- ◆ Redundant communications is key to providing timely CASEVAC.

Technique: Medics can monitor the TF command net in the BAS. If message traffic is heard that indicates units in contact had casualties, the Jump Aid Station can then jump forward and begin treatment according to a predetermined plan. CASEVAC system is set in motion more quickly than waiting for the message to arrive over Admin/Log (A/L) net. This also provides a backup in the event the A/L net is rendered ineffective due to jamming.

D. MAINTENANCE AND CASUALTY EVACUATION

- ◆ Co-locating maintenance and medical assets facilitates casualty evacuation. Maintenance soldiers should be trained as Combat Lifesavers and be proficient in casualty extraction techniques from combat vehicles. They should carry appropriate medical supplies as well, such as litters and IVs. Vehicles being evacuated to the rear for repair can carry casualties.

E. INCLUSION OF CASEVAC INTO HOME STATION TRAINING

- ◆ CASEVAC must be integrated into home station tactical training. TF leaders made the observation that the first few days at a CTC presented great problems because the unit had not rehearsed casualty evacuation during home station training.
- ◆ Ambulance drivers must be proficient at map reading and navigating mounted over unfamiliar terrain at night. This facilitates getting to CCPs, BASs, AXP's, etc. Land navigation training at home station is critical!!
- ◆ Sudden unexpected casualties in large numbers can occur during the battle. An example is a mix-dropped CAS strike on friendly troops. CTC experience has shown medical units do not respond to this well. They are not prepared for the massive numbers of unexpected casualties and rapidity of occurrence, nor the distances involved in CASEVAC. The key to success is to rehearse under these conditions at home station. Coordinate with the maneuver units to provide simulated casualties. Training conditions are critical--visibility, distances, terrain, number and types of casualties, transportation .

F. COLOR CODED TRIAGE SYSTEM

- ◆ This system involves the use of color coded signs during daylight hours and color coded chemlights at night placed in front of the appropriate treatment areas. Any color combination can be used. For example: RED can be used for expectant, BLUE for immediate, and GREEN for minimal. When casualties arrive, the DA Form 1380 (Patient Identification Card) is marked IAW the triage system. The litter team then takes the casualty to the appropriate treatment area using the respective color coded term such as "RED" rather than "EXPECTANT." This makes it easier for litter bearers, who are often not medics, to identify which treatment area to take the patient. The result is faster treatment. This system should be included in your TSOP. The color codes selected must not conflict with other operational signals.

G. USE OF MINIMAL PATIENTS

- ◆ "Minimal" patients, by definition, only require limited treatment and can be returned to duty immediately. At CTCs, medical elements do not maximize use of minimal casualties. These casualties, once treated, await unit transportation back to their unit. This can sometimes take several hours at BAS or several days at the medical company. These soldiers are often able-bodied and can be put to good use by the medical element.

Technique: Use these soldiers for litter bearers, freeing more medics for patient care. These soldiers can also be used for perimeter guard, mess duty, patient administration, or as ground guides.

H. CASUALTY EVACUATION AND THE SCOUTS AND MORTARS

- ◆ Specialty platoons are not authorized medics. Scouts often operate well forward of the FEBA/FLOT. The mortar platoon operates approximately 1500 meters behind the FEBA/FLOT. These distances from company team (which have medics) can inhibit timely CASEVAC. This problem applies as well to other widely scattered elements such as ADA and GSR teams.

Technique: Conduct coordination with maneuver companies in close proximity to the special platoon. Maneuver companies can assist the scouts by evacuating casualties from forward of the FEBA to pre-planned casualty collection points in the company team zone or sector. Coordination may need to be conducted with more than one maneuver company. Maximize training of mortar and scout soldiers as Combat Lifesavers. Companies must coordinate with all units in their sectors behind the FEBA, such as ADA, weapons, and engineers.

I. LOCATING CASUALTIES

- ◆ Locating casualties during and after battle can be a time-consuming task, especially at night or in dense woods.

Technique: Identify vehicles with critically injured patients by marking the vehicle with a red flag or cloth during daylight and a red chemlite at night. This allows the medics to know which carriers or tanks to go to first to render aid and CASEVAC. Glint tape attached to the casualty permits medics using the IR source on night vision goggles to locate them at night. Whatever the signal, it must be outlined in the TACSOP and deconflicted with other signals.

J. RECONNAISSANCE AND COORDINATION

- ◆ Reconnaissance of evacuation routes and face-to-face coordination are absolutely essential for both medical and task force personnel. 1SG must insure medics physically recon routes to platoon positions and back to casualty collection points. Medical platoon leaders and platoon sergeants should take evacuation vehicle crews forward when they go to the company locations to coordinate with the 1SG/XO.

This face-to-face coordination helps the medical platoon leader understand the company plan and the company leaders understand the medical plan. It also familiarizes evacuation drivers with routes and terrain.

K. FORWARD LOGISTICS ASSISTANCE TEAM (FLAT)

- ◆ FLAT has been developed and successfully used in a Light Infantry Division to make maximum use of limited CSS resources. A FLAT is formed for a specific mission of limited duration based on METT-T. It consists of assets from TF and supporting CSS units (maintenance battalion, supply and transportation battalion, and medical battalion). It usually contains medical and CASEVAC, supply, maintenance, transportation, and communications assets which deploy directly behind an assaulting force. The FLAT advances as the maneuver force advances and bridges the gap between the forward element and TF combat trains. The FLAT is not a substitute for LOGPAC, but is used in conjunction with it to provide more responsive support. If the specific mission for which the FLAT is formed becomes drawn out, it is dissolved in favor of the LOGPAC which provides continuous sustainment for the combat force. More on FLAT (and in greater detail) in the forthcoming CSS newsletter.

NCO CORNER

- ◆ The action soldier at all levels of a medical operation is the NCO, putting the commander's plan into action and coordinating efforts necessary to ensure mission success. MEDICAL AND LINE NCOs ARE JUST AS CRITICAL. THEIR ACTIONS SUPPORT EACH OTHER.
- ◆ Helping develop a workable, complete, concise plan is an example of the significant role NCOs must play. Whether or not a unit is successful in combat can to a great extent be determined by the Tactical Standard Operating Procedures (TACSOP) of the organization.

Included in the TACSOP are general procedures such as NBC operations, personal and unit equipment, resupply procedures, and CASEVAC.

- ◆ Total involvement of the NCO Support Channel is essential during the preparatory as well as the execution phase.

As supply and property manager, the NCO is responsible for accountability and serviceability of all equipment and personnel assigned to the section. The medical NCO must anticipate casualties and ensure needed supplies are requisitioned and on hand. Be proactive!

The medical portion of the OPORD must provide specific instructions for evacuation not otherwise addressed in the TACSOP.

Generally, the majority of casualties don't receive timely treatment.

Fifty percent of casualties die of wounds at the CTCs due to lack of timely CASEVAC or effective triage. Medical NCOs at every level must be involved in the development of the unit's OPORD.

Maneuver units rehearse their drills and tactics prior to participation at a CTC. Likewise, unit medics under NCO supervision must rehearse CASEVAC to standard.

CASEVAC is a team effort. Line NCOs have a tremendous role to play. From point of injury to the division rear, NCOs lead the way. COMBAT, IN THIS CASE CASEVAC, IS NOT A SPECTATOR SPORT. GET INVOLVED!!

SAFETY

Don't let enthusiasm and concern for casualties override common sense and safety considerations. Whether flying in a MEDEVAC helicopter in marginal weather or driving a CASEVAC M113 at night across the desert, keep the risks in balance.

Acknowledgments

COL Livio F. Pardi
Deputy Assistant Commandant for
Training/Clinical Affairs
AHS, Ft Sam Houston, TX

LTC Jack Roden
Director of Evaluation and Standardization
Ft Sam Houston, TX

LTC Wells
Medical Field Service School
AHS, Ft Sam Houston, TX

Maj Craig Hacker
AMEDD Recruiting
Ft Sam Houston, TX

Maj Ogle
Operations Branch, Military Science Division
AHS, Ft Sam Houston, TX

CPT Silver
O/C, JRTC
Ft Chaffee, AR

CPT James Robbins
Obs Div. JRTC
Ft Chaffee, AR

CPT Tony Nichols
O/C, NTC
Ft Irwin, CA
CPT Robert Gray
Directorate of Training and Doctrine
AHS, Ft Sam Houston, TX

SGM Glenn Shaw
O/C, NTC
Ft Irwin, CA

Mr Roy Flowers, GS 11
Doctrine and Training Literature Division
AHS, Ft Sam Houston, TX